



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

$$\sin P = \frac{-\sec \phi \tan \beta \tan \delta \pm \tan \phi (\sec^2 \phi \tan^2 \beta + \tan^2 \phi - \tan^2 \delta)^{\frac{1}{2}}}{\sec^2 \phi \tan^2 \beta + \tan^2 \phi}.$$

The time A. M. =  $12 - P^\circ / 15^\circ$ .

Also solved by *G. B. M. ZERR*, and *J. SCHEFFER*.

**95.** Proposed by *WILLIAM HOOVER*, A. M., Ph. D., Professor of Mathematics and Astronomy, Ohio State University, Athens, Ohio.

"I enjoy here," said Goethe, "both good days and good nights. Often before dawn I am already awake, and lie down by the open window to enjoy the splendor of the three planets, which are at present to be seen together, and to refresh myself with the increasing brilliancy of the morning red," This was written in the summer of 1828 near Weimar. See Goethe's "Conversations with Eckermann," Bohn's Library, 1898, page 323.

What three planets are referred to ?

Solution by *G. B. M. ZERR*, A. M., Ph. D., Professor of Chemistry and Physics, The Temple College, Philadelphia, Pa.

We will only consider Mercury, Venus, Mars, Jupiter, and Saturn, as Uranus and Neptune are too faint to reveal any splendor. The event would happen soon after conjunction.

Mars and Sun were in conjunction January 16, 1900.

Jupiter and Sun were in conjunction November 13, 1899.

Saturn and Sun were in conjunction December 29, 1900.

Venus and Sun were in conjunction inferior July 4, 1900.

Mercury and Sun were in conjunction superior February 9, 1900.

Synodic period of Mars, 780 days ; of Jupiter, 399 days ; of Saturn, 378 days ; of Venus, 584 days ; of Mercury, 116 days.

From July 1, 1828, to January 16, 1900, are 26132 days.  $26132 \div 780 = 33$  and 392 days over. Therefore the conjunction of Mars and the Sun happened 392 days after July 1, 1828, and so Mars was not one of the three planets.

From July 1, 1828, to November 13, 1899, are 26068 days.  $26068 \div 399 = 65$  and 133 days over. Therefore Jupiter could not have been one of the three planets.

From July 1, 1828, to December 29, 1900, are 26479 days.  $26479 \div 378 = 70$  and 19 days over. Therefore the conjunction of Saturn and the Sun happened only 19 days after July 1, 1828.

From July 1, 1828, to July 4, 1900, are 26301.  $26301 \div 584 = 45$  and 21 days over. Therefore the conjunction of Venus (inferior conjunction) happened only 21 days after July 1, 1828.

From July 1, 1828, to February 9, 1900, are 26156 days.  $26156 \div 116 = 225$  and 56 days over. Therefore superior conjunction of Mercury and the Sun happened 56 days after July 1, 1828. Thirty-six days previous to this or 20 days after July 1, 1828, Mercury was at greater elongation and therefore nearly as bright as Sirius.

Therefore Mercury, Venus and Saturn are the three planets referred to and the time the latter part of July.